AMENDMENTS TO THE CLAIMS

Listing of Claims

1. (Currently Amended) A method of coating a product ~~gas turbine blade~~ with a metallic anti-oxidation coating in one single vacuum plant, the plant including ~~a coating region separate from a postheat region, the method comprising:~~ a coating chamber and a postheat treatment chamber separated from the coating chamber, wherein the postheat treatment chamber is connected to the coating chamber in a vacuum-tight manner, the method comprising:

heating the ~~gas turbine blade,~~ product brought into the coating chamber~~vacuum plant~~ and subjected to a vacuum~~,~~ from room temperature to a ~~gas turbine blade~~ product temperature~~, the gas turbine blade being permanent in a vacuum in the vacuum plant,~~;

applying the metallic anti-oxidation coating to the ~~gas turbine blade~~ product being ~~permanent~~ in a vacuum~~, wherein the anti-oxidation coating causes the temperature of the gas turbine blade to drop, but not to a room temperature level, and~~;

transferring the coated ~~gas turbine blade~~product from the coating ~~region~~chamber to ~~a~~the postheat ~~region~~ treatment chamber by a transfer system~~of the vacuum plant~~ without interruption of the vacuum~~,~~;

subjecting the coated ~~gas turbine blade~~product to a postheat treatment ~~being permanent~~in the postheat treatment chamber in a vacuum, wherein the postheat treatment follows the application of the coating in such a way that the temperature of the ~~gas turbine blade~~product, after the application of the coating and before the postheat treatment, is at least equal to a minimum temperature, the minimum temperature being higher than room temperature~~,~~; and ~~wherein the~~

transferring the coated ~~gas turbine blade~~product ~~is thereafter transferred~~from the vacuum plant.

2. (Previously Presented) The method as claimed in claim 1, wherein the minimum temperature is about 500 K.

3. (Canceled).

4. (Currently Amended) The method as claimed in claim ~~3~~1, wherein the ~~coated gas turbine blade~~product is automatically transferred from the coating ~~region~~chamber into the postheat treatment ~~region~~chamber.

5. (Currently Amended) The method as claimed in claim 1, further comprising:

cooling down the ~~gas turbine blade~~product subjected to postheat treatment, to room temperature in a controlled manner.

6. (Currently Amended) The method as claimed in claim ~~3~~1, wherein a first number of ~~gas turbine blades~~products is located in the coating ~~region~~chamber and simultaneously, a second number of ~~gas turbine blades~~products is located in the postheat treatment ~~region~~chamber, the second number being larger than the first number.

7. (Currently Amended) The method as claimed in claim 1, wherein a material used for the ~~gas turbine blade~~product is one of a nickel-, iron-, or cobalt-base superalloy.

8. (Previously Presented) The method as claimed in claim 1, wherein the metallic anti-oxidation coating is an MCrAlX alloy, where M stands for one or more elements of the group including iron, cobalt and nickel; Cr stands for chromium; Al stands for aluminum; and X stands for one or more elements of the group including yttrium, rhenium and the elements of the rare earths.

9. (Currently Amended) An apparatus for coating a ~~gas turbine blade~~product with a metallic anti-oxidation coating in one single vacuum plant, comprising:

a coating chamber; ~~and~~

a postheat treatment chamber~~,~~ separated from the coating chamber,

wherein the postheat treatment chamber is connected to the coating chamber in a vacuum-tight manner~~such that a gas turbine blade is transferable from the coating chamber to the postheat chamber without interruption of the vacuum, and~~,

wherein both chambers are maintained in ~~permanent~~ vacuum such that the ~~gas turbine blade is maintainable permanent in vacuum~~product is not exposed to the atmosphere from a time of entry into the vacuum plant until a time of exit from the vacuum plant, and

wherein the postheat treatment chamber is connected to the coating chamber such that the product is transferable by a transfer system from the coating chamber to the postheat treatment chamber without interruption of the vacuum.

10. (Previously Presented) The apparatus as claimed in claim 9, wherein a heating device is provided in the postheat treatment chamber.

11. (Previously Presented) The apparatus as claimed in claim 9, further comprising:

a preheating chamber, the preheating chamber being arranged upstream of the coating chamber and being connected to the coating chamber in a vacuum-tight manner.

12. (Previously Presented) The apparatus as claimed in claim 9, further comprising:

a cooling chamber, the cooling chamber being arranged downstream of the postheat treatment chamber and being connected to the postheat treatment chamber in a vacuum-tight manner.

13. (Previously Presented) The apparatus as claimed in claim 9, wherein the connection between the coating chamber and the postheat treatment chamber is produced via a lock chamber.

14. (Previously Presented) The apparatus as claimed in claim 13, wherein a heating device is provided in the lock chamber.

15. (Currently Amended) The apparatus as claimed in claim 9, further comprising:

a transfer system for the automatic transfer of the ~~gas turbine blade~~product from one chamber into another chamber of the vacuum plant.

16. (Currently Amended) The apparatus as claimed in claim 9, wherein the coating chamber includes a first receiving capacity for products and the postheat treatment chamber includes a second receiving capacity for ~~gas turbine blades~~products, the second receiving capacity being greater than

the first receiving capacity.

17. (Previously Presented) The method of claim 1, wherein the minimum temperature ranges from about 900K to about 1400 K.

18. (Canceled).

19. (Previously Presented) The apparatus as claimed in claim 11, further comprising:

a cooling chamber, the cooling chamber being arranged downstream of the postheat treatment chamber and being connected to the postheat treatment chamber in a vacuum-tight manner.

20. (Previously Presented) The apparatus as claimed in claim 11, wherein the vacuum-tight connection between the coating chamber and the postheat treatment chamber is produced via a lock chamber.

21. (Previously Presented) The apparatus as claimed in claim 12, wherein the vacuum-tight connection between the coating chamber and the postheat treatment chamber is produced via a lock chamber.

22. – 24. (Canceled).

25. (Previously Presented) The apparatus as claimed in claim 20, wherein a heating device is provided in the lock chamber.

26. (Previously Presented) The apparatus as claimed in claim 21, wherein a heating device is provided in the lock chamber.

27. (Previously Presented) The method as claimed in claim 5, wherein the metallic anti-oxidation coating is an MCrAlX alloy, where M stands for one or more elements of the group including iron, cobalt and nickel; Cr stands for chromium; Al stands for aluminum; and X stands for one or more elements of the group including yttrium, rhenium and the elements of the rare earths.

28. (Previously Presented) The method as claimed in claim 7, wherein the metallic anti-oxidation coating is an MCrAlX alloy, where M stands for one or more elements of the group including iron, cobalt and nickel; Cr stands for chromium; Al stands for aluminum; and X stands for one or more elements of the group including yttrium, rhenium and the elements of the rare earths.

29. (Previously Presented) The apparatus as claimed in claim 11, wherein the vacuum-tight connection between the coating chamber and the preheating chamber is produced via a lock chamber.

30. (Canceled).

31. (Previously Presented) The apparatus as claimed in claim 29, wherein a heating device is provided in the lock chamber.

32. (Canceled).

33. (Currently Amended) A vacuum plant, comprising:

a coating chamber, wherein a ~~gas turbine blade~~product is adapted to be coated with a metallic anti-oxidation coating while in a vacuum; ~~and~~

a postheat treatment chamber, wherein the coated ~~gas turbine~~

~~blade~~product is adapted to be subjected to ~~heat~~postheat treatment while in a vacuum~~, and~~;

a lock chamber, which produces a vacuum-tight connection between the coating chamber and the postheat treatment chamber, wherein the lock chamber separates the postheat treatment chamber from the coating chamber, and wherein a temperature of the ~~gas turbine blade,~~product after coating and before postheat treatment~~,~~ is at least equal to a minimum temperature which is higher than ~~at~~ room temperature~~,~~; and

a plurality of transfer systems respectively provided in each of the coating chamber, the postheat treatment chamber, and the lock chamber, which transfers the product from one chamber to another ~~wherein the gas turbine blade is transferable from the coating chamber to the postheat chamber~~ without interruption of the vacuum~~, and wherein all chambers are maintained in permanent vacuum such that the gas turbine blade is maintainable permanent in vacuum from a time of entry into the vacuum plant until a time of exit from the vacuum plant~~.

34. (Previously Presented) The vacuum plant of claim 33, wherein the minimum temperature is about 500 K.

35. (Previously Presented) The vacuum plant of claim 33, wherein the minimum temperature ranges from about 900K to about 1400 K.

36. (Canceled).

37. (Currently Amended) The vacuum plant of claim ~~36~~33, further comprising:

a preheating chamber, the preheating chamber being arranged upstream

of the coating chamber and being connected to the coating chamber in a vacuum-tight manner.

38. (Currently Amended) The vacuum plant of claim ~~36~~33, further comprising:

a cooling chamber, the cooling chamber being arranged downstream of the postheat treatment chamber and being connected to the postheat treatment chamber in a vacuum-tight manner.

39. (Previously Presented) The vacuum plant of claim 37, further comprising:

a cooling chamber, the cooling chamber being arranged downstream of the postheat treatment chamber and being connected to the postheat treatment chamber in a vacuum-tight manner.

40. (Canceled).

41. (Currently Amended) The vacuum plant of claim ~~36~~33, ~~further comprising: a~~wherein the transfer ~~system for the automatic~~systems automatically transfer ~~of~~ the ~~gas turbine blade~~product from one chamber into another chamber of the vacuum plant.

42. (Currently Amended) The vacuum plant of claim 37, ~~further comprising: a~~wherein the transfer ~~system for the automatic~~systems automatically transfer ~~of~~ the ~~gas turbine blade~~product from one chamber into another chamber of the vacuum plant.

43. (Currently Amended) The vacuum plant of claim 38, ~~further comprising: a~~wherein the transfer ~~system for the automatic~~systems automatically transfer of the ~~gas turbine blade~~product from one chamber into another chamber of the vacuum plant.

44. (Currently Amended) A method of coating a ~~gas turbine blade~~ product with a metallic anti-oxidation coating in one single vacuum plant, the plant including a coating ~~region~~chamber, a postheat ~~region~~treatment chamber, and a lock chamber connecting the coating ~~region~~ chamber and the postheat ~~region~~treatment chamber, the method comprising:

heating the ~~gas turbine blade~~product, brought into the ~~vacuum plant~~coating chamber and subjected to a vacuum, from room temperature to a ~~gas turbine blade~~product temperature~~, the gas turbine blade being permanent in a vacuum in the vacuum plant,~~;

applying the metallic anti-oxidation coating to the ~~gas turbine blade being permanent in a vacuum, wherein the anti-oxidation coating causes the temperature of the gas turbine blade to drop, but not to a room temperature level,~~product;

transferring the coated ~~gas turbine blade~~product from the coating ~~region~~chamber to ~~a~~the lock chamber by a transfer system, wherein a temperature of the ~~gas turbine blade~~product, after coating and before postheat treatment, is at least equal to a minimum temperature which is higher than ~~at~~ room temperature~~,~~;

transferring the coated ~~gas turbine blade~~product from the lock chamber to the postheat ~~region~~ treatment chamber by a transfer system~~of the vacuum plant without interruption of the vacuum, and~~;

subjecting the coated ~~gas turbine blade~~product to a postheat treatment being ~~permanent~~ in a vacuum~~,~~; and

transferring ~~wherein~~ the coated ~~gas turbine blade~~product ~~is thereafter transferred~~ from the vacuum plant.

45. (New) A method of coating a product with a metallic anti-oxidation coating in one single vacuum plant having a coating chamber and a postheat treatment chamber separated from the coating chamber, wherein the postheat treatment chamber is connected to the coating chamber in a vacuum-tight manner, the method comprising:

heating the product brought into the coating chamber and subjected to a vacuum from room temperature to a product temperature and applying the metallic anti-oxidation coating to the product being in a vacuum;

transferring the coated product from the coating chamber to a postheat treatment chamber by a transfer system without interruption of the vacuum;

subjecting the coated product to a postheat treatment in the postheat treatment chamber in a vacuum, using a heating device, enabling a different temperature compared to the temperature of the coating chamber, wherein the postheat treatment follows the application of the coating in such a way that the temperature of the product, after the application of the coating and before the postheat treatment, is at least equal to a minimum temperature, the minimum temperature being higher than room temperature; and

transferring the coated product from the vacuum plant.

46. (New) A method of coating a product with a metallic anti-oxidation coating in one single vacuum plant, the plant including a coating chamber and a postheat treatment chamber separated from the coating chamber, wherein the postheat treatment chamber is connected to the coating chamber in a vacuum-tight manner, the method comprising:

heating the product brought into the coating chamber and subjected to a vacuum from room temperature to a product temperature and applying the metallic anti-oxidation coating to the product being in a vacuum;

transferring the coated product from the coating chamber to the postheat treatment chamber by a transfer system without interruption of the vacuum;

subjecting the coated product to a postheat treatment in the postheat treatment chamber in a vacuum and simultaneously heating and coating a new number of products in the coating chamber, wherein the postheat treatment follows the application of the coating in such a way that the temperature of the product, after the application of the coating and before the postheat treatment, is at least equal to a minimum temperature, the minimum temperature being higher than room temperature; and

transferring the coated product from the vacuum plant.

47. (New) A vacuum plant, comprising:

a coating chamber, wherein a product is adapted to be coated with a metallic anti-oxidation coating while in a vacuum;

a postheat treatment chamber with a second heating device, wherein the coated product is adapted to be subjected to heat treatment while in a vacuum;

wherein the postheat treatment chamber is separated from the coating chamber through a lock chamber with a first heating device;

wherein the first heating device is separately controllable from the second heating device;

wherein the lock chamber produces a vacuum-tight connection between the coating chamber and the postheat treatment chamber;

wherein a temperature of the product after coating and before postheat treatment is at least equal to a minimum temperature which is higher than room temperature; and

a plurality of transfer systems respectively provided in each of the coating chamber, the postheat treatment chamber, and the lock chamber, which transfers the product from one chamber to another without interruption of the vacuum.